

CHROMOSOME NUMBERS IN KOSTELETZKYA  
PRESL (MALVACEAE)

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Heretofore, knowledge of the cytology of *Kosteletzkya* Presl has consisted of a single chromosome count from *K. hastata* Presl (Skovsted, 1941). This note corrects the number erroneously reported by Skovsted and adds counts from two African species, *K. adoensis* (Hochst. ex A. Rich.) Mast., and *K. buettneri* Gürke, and four American species, *K. coulteri* A. Gray, *K. pentasperma* (Bertero ex DC.) Griseb. *K. paniculata* Benth., and *K. virginica* (L.) Presl ex A. Gray (Table 1).

Counts were made from pollen mother cells of buds collected in the wild or taken from plants grown from seeds collected in the wild. Methods of fixation, preparation, and documentation are those reported by Bates and Blanchard (1970). Voucher specimens have been deposited in the L. H. Bailey Hortorium (BH).

The species counted represent a rather wide range of morphological diversity in the genus as well as a considerable geographical range. *Kosteletzkya paniculata* belongs to the specialized sect. *Orthopetalum* Benth. of western Mexico, which is notable in its convolute, tubular corolla and its exserted staminal column. The remaining species, both African and American, belong to the widespread sect. *Kosteletzkya*, but within that section represent a diversity of forms. The fact that counts made from all these species are the same,  $n = 19$ , suggests that the number in the genus may be constant. At variance with this conclusion is Skovsted's report of  $2n = 34$  in *K. hastata*, a species closely related to *K. pentasperma*. However, an examination of the illustration by Skovsted (1941, fig. 99) shows 38 chromosomes rather than the reported 34. It may therefore be assumed that the gametic chromosome number of *K. hastata* is also  $n = 19$ .

The error that entered Skovsted's paper is of further interest because he used the erroneous count to support Hochreutiner's suggestion (1900) that *Kosteletzky* could be related to *Hibiscus* sect. *Pterocarpus* Garcke ex Hochreutiner, a section known cytologically only from *H. vitifolius* L. with a chromosome number of  $n = 17$  (Skovsted, 1935, 1941). There are ample reasons on morphological grounds for relating *Kosteletzky* and *Hibiscus* sect. *Pterocarpus*, e.g., they share depressed, pentagonal, 5-crested capsules, the valves of which fall away completely from the floral axis at maturity, as well as similarities in calyx, involucre, and vegetative characters. Now, however, any proposal to unite the two taxa must take into account the difference in chromosome numbers.

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